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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/021,421	02/10/1998	RUSSEL T. JORDAN	399037	4431

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EXAMINER	
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ART UNIT	**PAPER NUMBER**
1614	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	09/021,421	JORDAN ET AL.	
	Examiner	Art Unit	
	James D. Anderson	1614	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *30 March 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-7,14-21,34-36 and 39-50* is/are pending in the application.

4a) Of the above claim(s) *7 and 44* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-6,14-21,34-36,39-43 and 45-50* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

CLAIMS 1-7, 14-21, 34-36 & 39-50 ARE PRESENTED FOR EXAMINATION

Applicants' amendment filed 3/30/2007 has been received and entered into the application. Accordingly, claims 16-19, 34-35 and 47-50 have been amended. Claims 7 and 44 remain withdrawn from consideration.

In view of the above amendments and Applicants' remarks at pages 6-7 of their response, the rejection of claims 1, 14-21, 34-36, 47 and 50 under 35 U.S.C. § 112, 1st Paragraph (Written Description) and claims 17-18, 39-43 and 45-50 under 35 U.S.C. § 112, 2nd Paragraph have been overcome and thus are *withdrawn*. Upon further consideration, the following rejections are either reiterated or newly applied and constitute the totality of issues remaining in the present application.

Election/Restrictions

Claims 7 and 44 remain withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 8/10/2000. Applicants' arguments have been fully considered but they fail to persuade the Examiner of an error in his determination that claims 7 and 44 are drawn to a non-elected invention. Applicants argue that claims 7 and 44 recite a composition in combination with necrotic tissues and therefore should be examined with the composition claims from which they depend. This argument is not persuasive because the elected invention (claims 1-6, 14-21, 34-36, 39-43 and 45-50) is drawn to compositions comprising 8-hydroxyoquinoline and a chelatable metal agent. Claims 7 and 44 are product-by-process claims, the *product* being a composition

comprising 8-hydroxyquinoline, a chelatable metal agent and necrotic tissue from a lesion *produced by* the action of 8-hydroxyquinoline and the chelatable metal agent upon a lesion. In other words, the **process** of applying a composition comprising 8-hydroxyquinoline and a chelatable metal agent to a lesion results in the **production** of a product comprising the composition (8-hydroxyquinoline and chelatable metal agent) and necrotic tissue from the lesion.

Accordingly, claims 7 and 44 are not drawn to the elected invention, which is drawn to a composition comprising 8-hydroxyquinoline and a chelatable metal agent.

Claim Rejections - 35 USC § 112 (1st Paragraph)

The following is a quotation of the first paragraph of 35 U.S.C. § 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-6, 14-21, 34-36, 39-43 and 45-50 are rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. This is a New Matter rejection.

The specification (pages 3-4) discloses compositions comprising "a chelatable metal agent" and the originally filed claims (see claims submitted 2/10/1998) recited compositions containing "a chelatable metal agent". In response to the Non-Final Office Action mailed 9/26/2000, Applicants submitted amendments to the claims that limited the chelatable metal agent to "an escharotic chelatable metal agent" (see claims submitted 12/29/2000). In the

absence of a showing to the contrary, it is not seen by the Examiner that the scope of "chelatable metal agent" and "escharotic chelatable metal agent" are the same. As Applicants contemplated any chelatable metal agent having an oxidation state of +2 in the originally filed specification and claims, the recitation of "escharotic chelatable metal agent" is viewed as new matter. It is not evident from the specification that Applicants contemplated limiting the chelatable metal agent to only those that are escharotic.

Claim Rejections - 35 USC § 112 (2nd Paragraph)

The following is a quotation of the second paragraph of 35 U.S.C. § 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 2, 20 and 21 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In the instant case, the claims recite the limitation "includes" to limit the metal agent (claim 2) or antioxidant (claims 20 and 21) recited in previous claims. This limitation is indefinite because it is not clear what is included or excluded from the claims. For example, if the antioxidant "includes" ascorbic acid (as recited in claim 21), are other antioxidants *excluded*?

Claims 3 and 42 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In the instant case, the claims recite a ratio (1:2) preceded by the modifier "about" (*e.g.*, "about 1:2"). This limitation is indefinite because it is not clear if "about" modifies only the first component or if it modifies the entire ratio. For example, if the

former is Applicants' intent, the ratio is reasonably interpreted as 0.8:2 or 1.2:2. If the latter interpretation is Applicants' intent, the ratio reasonably encompasses 0.8:2.3 or 1.3:1.7. Applicants are requested to clarify how they intend the recited "about 1:2" to be interpreted.

Claim 35 is rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In the instant case, claim 35 recites "an ascorbic acid". This limitation is indefinite because it is not clear if Applicants intend the antioxidant to be ascorbic acid or if "an ascorbic acid" is intended to encompass derivatives of ascorbic acid. For the purposes of examination, the Examiner has interpreted "an ascorbic acid" to be limited to ascorbic acid proper.

Accordingly, the metes and bounds of the patent protection sought by Applicants are not clear and concise as required by 35 U.S.C. § 112, 2nd Paragraph.

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. § 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR § 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later

invention was made in order for the examiner to consider the applicability of 35 U.S.C. § 103(c) and potential 35 U.S.C. § 102(e), (f) or (g) prior art under 35 U.S.C. § 103(a).

Claims 1-6, 14-15, 19-21, 39, 41-43, 45-46 and 50 are rejected under 35 U.S.C. § 103(a) as being unpatentable over EP 0 506 207 A2 (Published 9/30/1992) (prior art of record) in view of Applicants' disclosure at page 2.

EP '207 discloses the use of water-soluble zinc-containing compounds in topical pharmaceutical compositions containing pharmacologically active agents to enhance the skin or mucous membrane penetration and retention of the pharmacologically active agent (Abstract). The preferred water-soluble zinc-containing compounds include zinc chloride as recited in the instant claims (page 2, lines 42-43). Said water-soluble zinc-containing compounds are disclosed to dissociate in the topical vehicle so as to provide zinc ions for complexation or chelation with the pharmacologically active agents present in the vehicle (page 3, lines 10-12). Zinc-containing compounds are preferably present in an equimolar ratio with the pharmacologically active agents, thus meeting the limitation of instant claims 2-3 and 41-42 (*id.* at lines 24-25). With respect to the instantly claimed concentration of 8-hydroxyquinoline of at least 5 percent, it would have been obvious to use the same amount of active agent as the amount of the zinc-containing compound because the reference discloses equimolar ratios. Normally, use of equimolar amounts of a zinc-containing compound and pharmacologically active agent will not involve the use of escharotic amounts of zinc chloride and less than 35% zinc chloride is disclosed to be an upper limit when no escharotic effect is desired (*id.* at lines 28-31). This upper limit meets the limitation "ranging up to forty percent by weight" as recited in instant claim 5 and "less than an amount that produces an eschar in healthy mammalian tissues" as

recited in instant claims 1 and 39. Other ingredients, including stability-enhancing agents and antioxidants may be added to the disclosed compositions (*id.* at lines 35-36). The reference thus reasonably suggests the addition of antioxidants such as nordihydroguiaretic acid and ascorbic acid as recited in instant claims 19-21, 34-36 and 50. With respect to the addition of the instantly claimed 8-hydroxyquinoline, EP '207 suggests that antifungal agents are suitable pharmacologically active agents for use in the disclosed compositions (page 4, lines 9-31). While 8-hydroxyquinoline is not recited in the list of antifungal agents in EP '207, it is noted that Applicants disclose at page 2, lines 3-22 of their specification that 8-hydroxyquinoline is a known antifungal agent and chelating agent (see especially lines 12-14). Thus, it would have been obvious to one of ordinary skill in the art to use 8-hydroxyquinoline as an antifungal agent in the compositions disclosed in EO '207. With respect to the carriers recited in claims 14-15 and 45-46, the reference discloses that typical carriers include water, gel-producing materials, propylene glycol, sorbitol, etc. (page 5, lines 40-43).

Accordingly, it would have been *prima facie* obvious to one of ordinary skill in the art at the time the invention was made to formulate a composition comprising 8-hydroxyquinoline and a chelatable metal agent such as zinc chloride. The motivation to do so is found throughout EP '207 wherein compositions comprising zinc chloride and pharmacologically active agents, including antifungal agents, are disclosed. As such, it would have been obvious to one of ordinary skill in the art that any antifungal agent, including the instantly claimed 8-hydroxyquinoline, could have been reasonably incorporated into the compositions disclosed in EP '207. Applicants' discovery that compositions comprising 8-hydroxyquinoline and zinc chloride can be used to treat epithelial lesions does not constitute a patentable distinction over

the compositions disclosed in the reference. This is because a composition comprising 8-hydroxyquinoline and zinc chloride, as reasonably suggested and motivated by EP '207, is capable of performing the use recited in the instant claims.

Claims 16-18 and 47-49 are rejected under 35 U.S.C. § 103(a) as being unpatentable over EP 0 506 207 A2 (Published 9/30/1992) (prior art of record) in view of Applicants' disclosure at page 2 as applied to claims 1-6, 14-15, 19-21, 39, 41-43, 45-46 and 50 above, and further in view of The Merck Index 12th Edition, 1996, Merck & Co., publ., pages 551 & 925-926 (newly cited art).

EP '207 discloses as discussed *supra*. The Merck Index is provided as evidence that lecithin is an edible and digestible surfactant and emulsifier of natural origin used in pharmaceuticals and cosmetics (page 926). Further, dimethyl sulfoxide is disclosed as a penetrant carrier to enhance absorption (page 551). Accordingly, it would have been *prima facie* obvious to one of ordinary skill in the art to use lecithin and/or dimethyl sulfoxide in a carrier for pharmaceutically active agents. The skilled artisan would reasonably expect that lecithin and/or dimethyl sulfoxide would be effective in increasing the absorption of the topical compositions disclosed in EP '207.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James D. Anderson whose telephone number is 571-272-9038. The examiner can normally be reached on MON-FRI 9:00 am - 5:00 pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ardin Marschel can be reached on 571-272-0718. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

James D. Anderson
Patent Examiner
AU 1614

June 8, 2007

Phyllis Spivack
PHYLLIS SPIVACK
PRIMARY EXAMINER
6/9/07